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By-Augenstein, Mildred B.

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The Teacher Characteristics Project, one of the five undertaken as part of the design of an individualized instructional system for Dade County Schools, was set up to study the role of the teacher in the new system. A survey of literature, research, and projected strategies pointed up these trends and generalizations: (1) a shift in emphasis from the teacher as presenter of information to the teacher as facilitator of conditions for learning; (2) a greater emphasis upon the preactive phase of teaching where the teacher must work with superiors, peers, and myriad sources of data to skillfully diagnose the child and expertly prescribe for his progress; (3) the phase of interactive teaching takes on the challenge of matching teaching style factors of influence management, relatedness, tone, and operational level to learning style of the pupil and learning activity at hand; (4) the teacher's growing role in the evaluative phase of teaching, where the teacher's style must induce objective interpretation of the system as a whole and of his own part in it. Products of the study include a set of operational definitions, a theoretical model for Individual Instructional Staff Assessment (Teacher Characteristics and Behavior Profiles), a Man-Machine Model of Instructional Behavior, and a Teaching Style Classification Scale for use in producing teaching style profiles. (The models and scale are included, plus discussion of implications for staff development and staff organization.) [Not available in hard copy due to marginal legibility of original document.] (JS)

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STYLE IS THE TEACHER

A Report of the
TEACHER CHARACTERISTICS PROJECT-1967-1968

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Mrs. Mildred B. Augenstein
Department of Research, Development, and Evaluation
Dade County Public Schools
Miami, Florida

SP003068

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TABLE OF CONTENTS

I. OBJECTIVES OF THE TEACHER CHARACTERISTICS PROJECT 1

II. DEFINITION AND DISTINCTIONS 3

III. A SEARCH FOR MODELS OF TEACHING BEHAVIOR 4

IV. APPLYING THE MODEL OF TEACHER BEHAVING STYLES TO INDIVIDUALIZED INSTRUCTION 8

V. CATEGORIZING THE COMPONENTS OF TEACHING STYLE 10

VI. MAKING THE SYSTEM WORK: THE IMPLICATIONS FOR STAFF DEVELOPMENT 14

VII. MAKING THE SYSTEM WORK: THE IMPLICATIONS FOR STAFFING 17

VIII. THE ONGOING SEARCH FOR STYLE 20

BIBLIOGRAPHY AND NOTES 21

Figure I: A MODEL OF INDIVIDUAL STAFF ASSESSMENT 5

Figure II: TEACHING STYLE CLASSIFICATION SCALE 11

Figure III: A MAN-MACHINE MODEL OF INSTRUCTIONAL BEHAVIOR 19

Human questions, if they are fundamental, can often seem disarmingly surface simple. Who am I? What am I doing? Is it good? Is it beautiful? These are modest questions, almost naive. Yet the basic philosophical interrogatives of all times are posed in such words. The questions which the Teacher Characteristics Project framed for itself in its eleven months of operation as a component of the Department of Research, Development and Evaluation in the Dade County Public School System needed to begin at this fundamental level of inquiry. A bold new conception of individualized instruction was being undertaken, and with it had to come a compatible way of defining instruction's primary resource, the teacher. Thus, some fundamental questions had to be asked: Who is the teacher in individualized instruction? What does he do and how does he come to do it? What are the values of his new mode of behavior? What are his problems, and what will be his satisfactions? Out of these might come answers to the meaning of the word "Teacher" in the school of tomorrow that is almost today.

The Teacher Characteristics Project began as an evolution of the "Strategy for Teaching." In the spring of 1966, Dr. John E. Bahner, who was then associate superintendent for instruction, had proposed a bold, venturesome design for the future educational system of Dade County, Florida. In his "Strategy for Teaching" Dr. Bahner challenged the school system to translate the dream of individualizing instruction into reality. He conceived of drawing from the advances in educational research, systems analysis and computer technology those resources needed to revolutionize instruction at the point of primary impact, the individual student.

In the summer of 1966, the Dade County Board of Public Instruction instituted a Department of Research, Development and Evaluation for the school system. R.D.&E.'s first task was undertaking the design of this individualized instructional system. The initial stage of operation, 1966-67, concentrated upon collecting, defining and structuring a set of goals for education in Dade County Schools. Then with the goals project underway, four additional projects, seen as the other components of an individualization model, were added for the second year, 1967-68. These projects were to deal with pupil characteristics, teacher characteristics, learning assessment and learning activities. It was in this second stage of development, beginning on August 23, 1967, that the Teacher Characteristics Project began operations with one staff member assigned as manager.

I. OBJECTIVES OF THE TEACHER CHARACTERISTIC PROJECT, 1967-68.

To formalize its activities for the year, the Teacher Characteristics Project defined a set of its objectives shown in the left-hand column of the chart below. As a result of its activities, a set of products described in the right-hand column was predicted. (1)

TEACHER CHARACTERISTICS PROJECT—1967-1968

OBJECTIVES

To survey the professional literature, the available measurements instruments and the research findings as a comprehensive approach to the project

To survey Dade County projected strategies, objectives, operational patterns or plans, and other field data as focus to the project

To discover, define, classify, and code variables of teacher characteristics significant to Dade County's "Strategy for Teaching"

To plan and begin to operate a number of controlled experiments designed either to yield needed data on specific variables or to develop specific operational plans and procedures involving teacher characteristics

To formulate a number of generalizations from the data which would give direction to Dade County's ongoing research and development in the sphere of teacher characteristics

To begin synthesizing "profiles" of teacher characteristics which can be used with given sets of instructional variables to achieve desired goals

To establish procedures of dissemination of findings

PRODUCTS

A set of operational definitions for dealing with teacher characteristics in Dade County

A classification and coding system for managing information on teacher characteristics in Dade County

A theoretical model or set of models structurally relating the central variables for research and development in teacher characteristics, these models to relate teacher behavioral characteristics to task and role dimensions of instruction

A set of designs for controlled research or development experiments in selected variables of teacher characteristics, said designs specifying the theoretical rationale and precise objectives of each experiment; the personnel, equipment, instruments and procedures involved; the criteria and methods of evaluation; the proposals for funding, dissemination and implementation

A collection of coded data derived from the comprehensive survey and of the research and development projects begun

A set of tentative generalizations or recommendations toward possible system modifications which would involve teacher characteristics

A plan for dissemination of findings

II. DEFINITIONS AND DISTINCTIONS

> That is not what I meant at all.
> That is not it, at all.
>
> *The Love Song of J. Alfred Prufrock*

Almost from the moment of inception, the Teacher Characteristics Project found itself at war with words. What, indeed, were meant by "Characteristics?" And how exactly would one define and delimit the adjunct, "Teacher?" *The Handbook of Research on Teaching* offered the following possibility for "characteristics":

> A characteristic of teachers is some physical, social, or other *non-behavioral* (italics mine) property. Examples of characteristics in this sense are the teacher's age, sex, social class, and years of teaching experience. Characteristics of teachers are generally considered to be involved in research on teaching insofar as they may influence learners directly or are related to teacher behaviors or characteristics that do influence learners directly. (2)

But surely so narrow a definition would not seem applicable to an entire sub-system of the proposed individualization model? Any successful innovation in teaching, no matter its particular nature, must primarily be concerned with what teachers *do*, how they *behave*—rather than with the non-behavioral properties they exhibit for a researcher's scrutiny. Clearly a shift in terminology seemed in order.

Defining the word "teacher" presented another problem. The traditional definition of teacher deriving from the agent suffix: "teacher: one who teaches" seems innocent enough until the root "teach" is confronted. This denotatively as well as connotatively has carried a referent of presentation: "teach" to impart knowledge or skills by lessons; to give instruction to; to train by practice or exercise." (3) Yet emerging theory on individualized instruction has suggested a noticeable shift in the delineating terms applied to teachers:

> Rather than being a presenter of information, the teacher will assume a role of consultant and/or director of learning activities, a diagnostician of individual student needs and a prescriber of learning alternatives—one who is responsible for insuring the meaningfulness of learning activities for individual students. This will involve the development of the ability to use student information from cumulative records as well as identifying clues in the daily contact with students for making individual assignments. It will necessitate the recording of accurate information about student attainment and successful teaching strategies for individual students for his own future reference and to aid other teachers who are or will be working with the child. (4)

Under Project PLAN (A Program for Learning in Accordance with Needs), this set of attributes is described: "It is believed that the teacher's role under this new system will be very different from the typical teacher role at present. Interaction with students is likely to be of a shorter time duration and the teacher will be spending much more time observing, diagnosing difficulties, and answering specific questions for students. This role will require more flexibility on the part of the teacher than is currently required of teachers in the school." (5) The further implication that machines will be moving more and more into realms previously dominated by teachers is suggested by this observation:

> Electronic instruction is going to be a real threat to the teacher who doesn't want to change his technique—or won't. Arrival of the computer in the classroom will mean that he must learn that his principal role is no longer to present subject matter. His new role will be quite different. Freed from the conventional classroom role, the teacher's role becomes more than that of a tutor. He will give assistance when extra help is required; he will be an individual counselor to diagnose learning difficulties; he will develop creative communicative abilities and skills; he will help the pupil develop concepts and logic; he will conduct small discussion groups; and he will play an inspirational role as an adult model. This teacher will be very different from the teacher of today. (6)

In fact, so strong is the thinking that machines must be reckoned with as the "quasi-personnel" of instruction that Bruce R. Joyce's review of educational research in the area of staff utilization indicates a present need for far more sophisticated studies of man-machine systems in staffing. (7)

It finally seemed necessary to begin with as encompassing a definition of teacher as possible, that is, *any man or machine making or carrying out decisions concerned with the instruction of students,* and from there delimit this definition when necessary by further categorization and negation.

The term, "characteristics," seemed best defined in terms of the input-output concept of systems analysis. If we were to think of any individual in relation to some instructional task, role or operation, it would be necessary to separate two factors about that individual: What he is and what he does. On one hand we might look at the individual himself and describe the kinds of details of his physical being, personality, and experiential background which make him the unique person that he happens to be. This represents the composite of personal factors which he could bring to or "input" to the teaching situation. Teacher "characteristics," then would deal with the *input composites of men and women which delineate the individuals themselves, not what they do.* In terms of "teaching" machines we might likewise delineate characteristics of basic design (hardware) and programing (software) to indicate their input potential to the system.

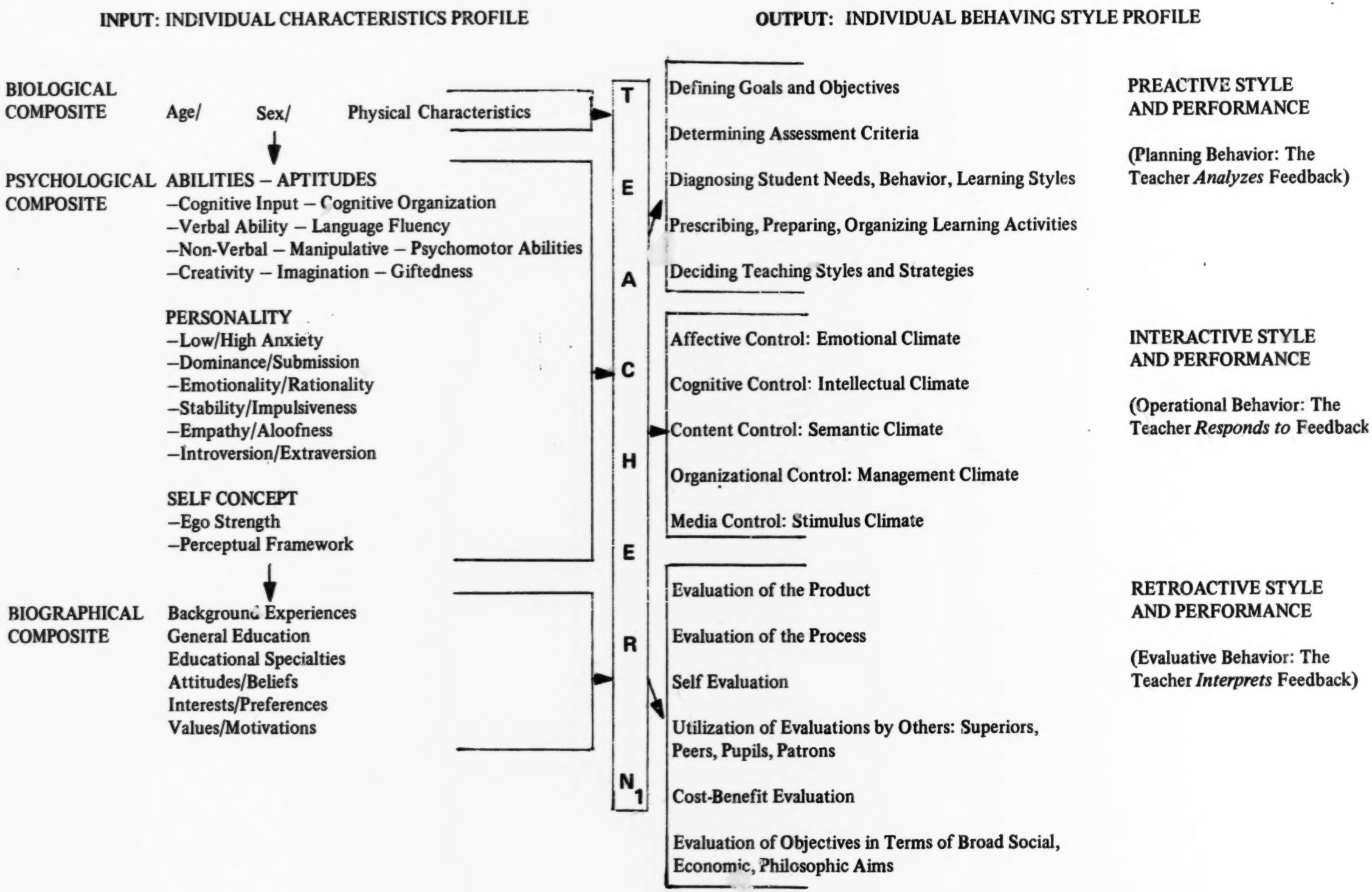
Such a decision about "characteristics" clearly called for another term to cover the second aspect which relates to the output stage of the teacher system. In describing the teacher, output seems to represent *what the teacher does that defines him as a teacher:* how he performs and the observable way he acts in any instructional task or situation. This is his *behavior.* And machines, too, can be observed as behaving in certain ways significant to the instructional totality. As a result it was decided to use the designation "behavior" to describe the teacher's output, that is, any *observable factors of his performance in the varied dimensions of teaching.*

The usefulness of this distinction between teacher characteristics and teacher behavior is apparent in Figure I, *A MODEL OF INDIVIDUAL INSTRUCTIONAL STAFF ASSESSMENT.* (See page 5). The input characteristics to the left produce one type of profile of the teacher, drawing together the individual factors of his biological, psychological and biographical composite. However, the individual teacher's personal self is only part of the story. His appellation, teacher, is finally determined by the output or behaving style he demonstrates in the preactive, interactive and retroactive phases of teaching. These behaviors are describable as profiles on the right-hand section of the chart.

III. A SEARCH FOR MODELS OF TEACHING BEHAVIOR

A fundamental principle of modern educational theory is that learning is facilitated where conceptual structures are developed. If the teacher is to learn behaviors associated with individualizing instruction, his progress toward such goals should be fostered through a clearer conceptualization of the nature of individualization itself. Some of this conceptual structure can be developed by observing and understanding his own teaching in an individual way. Although it is no secret that teachers themselves have been observed and tested for a long time, the nature of much of the observation has scarcely been clear or profitable. Teacher watching at best has been a haphazard business, and teachers through justifiable experience have learned to be wary. However, dramatic changes have taken place in educational research which brook promise for valuable kinds of observation which can benefit the teacher personally by helping him understand his own individual behavior better. The best part of the change is that the teacher can do a good deal of the observing himself.

Figure I. A MODEL OF INDIVIDUAL INSTRUCTIONAL STAFF ASSESSMENT



Part of the reasons for this promising change is the general improvement in research techniques themselves. Instrumentation has become sophisticated and research designs precise and perfectible. Another fundamental cause for improvement has come from a clarification between the ends and the means in research by the kinds of questions being asked in education today. Researchers have learned that they must first discover ways of defining the variables of teaching accurately before they can hope to measure them. Their questions have led to model building by which the movement from known to unknown can be systematically charted.

The suggested model for behaving style profiles shown on the right section of Figure I owes its genesis to this kind of heuristic approach used by Philip W. Jackson in the article "The Way Teaching Is." I quote a portion of this article at length because it is so fundamental to clarifying the issues we face in developing teachers who can individualize their instruction. Dr. Jackson focuses upon some fundamental differences between what he calls the "hidden" side of teaching and some of the more visible and well-known features of the process:

> When the teacher is alone in the classroom—before and after class, during recess, and the like—his behavior can be roughly classified into two categories: actions relevant to the task of teaching, and actions that are irrelevant. Among the irrelevant are activities such as taking a coffee break, writing a letter to a friend, making plans for a weekend party, and so forth. Many of these behaviors may be very necessary from the standpoint of restoring the teacher's strength so that he can go on with his work, but the content of the activity itself has nothing to do directly with teaching: hence, such activities will not concern us here.
>
> The second category—behavior that is relevant to the teaching task—includes such things as preparing lesson plans, arranging furniture and equipment within the room, marking papers, studying test reports, reading sections of a textbook, thinking about the aberrant behavior of a particular student, and so forth. Indeed, these activities are so crucial to the teacher's performance during regular teaching sessions that they would seem to deserve the label, "preactive" teaching. Such a designation commands our attention and helps us to distinguish this class of behavior from the "interactive" teaching activities that occur vis-a-vis the students.
>
> One of the chief differences between preactive and interactive teaching behavior seems to be in the quality of the intellectual activity involved in each. Preactive behavior is more or less deliberative. Teachers, when grading exams, tend to ponder the matter, to weigh evidence, to hypothesize about the possible outcome of a certain action. During these moments teachers often resemble, albeit crudely, the stereotype of the problem solver, the decision maker, the hypothesis tester, the inquirer. At such times teaching looks like a highly rational process.
>
> Now contrast this state of affairs with what happens when students enter the room. In the interactive setting the teacher's behavior is more or less spontaneous. When students are in front of him, and the fat is on the fire, so to speak, the teacher tends to do what he *feels* or *knows* is right rather than what he *thinks* is right. This is not to say, of course, that the teacher simply acts out nis feelings in the classroom. Thought is surely involved when class is in session, but is thought of quite a different order from that which occurs in an empty classroom.
>
> There appear to be two major reasons for this shift. First, the students to some extent control what the teacher does. When they are present much of the teacher's behavior is in response to their requests and questions and could not have been planned in detail ahead of time. In effect, the students "tell" the teacher what to do, and he simply does it without much thought. Much that goes on during a teaching session (or, for that matter, during almost any kind of an interpersonal encounter) is predictable in a broad sense only; the specifics must be dealt with as they happen. Further, many of these specifics do not resemble problems in any real sense of the word and do not call for prolonged and involved thought. When a student asks a teacher to repeat a question, or to tell him the date of the final exam, or to spell a difficult word, the teacher usually complies with the student's request without pausing to ponder its deeper meaning or to weigh the pros and cons of a complex set of alternative actions.
>
> These differences in the teacher's behavior with and without students have relevance for matters such as the conceptualization of the teaching task, the justification for certain training requirements, and the identification of the criteria of good teaching. Within the present context, only a word can be said about each of these matters.

> Lately it has become popular to think of the teacher's activity in terms that describe the problem solver or the hypothesis tester. Yet when such a model is applied no distinction is made between what we have called preactive and interactive teaching. As the models are sometimes applied they would lead us to think of the teacher as hypothesis-testing, or problem-solving, decision-making all day long. There may be some advantage in using these logical and highly rational models to describe the teacher's in-class activities, and there may even be some moments when the teacher feels like a decision maker in the interactive setting, but these moments, I would wager, are few and far between. It is possible, of course, to ignore the teacher's conscious feelings and to insist that whether he knows it or not the teacher is actually solving a thousand or so problems a day. But our conventional definition of problem solving is very much weakened when used in this way.
>
> During the preactive phase of teaching, however, models of rational inquiry do seem to have considerable descriptive power. As the teacher goes about deciding what textbook to use, how to group the children for reading, or whether to notify Billy's parents of his poor performance in arithmetic, his behavior is at least analyzable in terms that describe the rational problem solver. At such moments concepts such as evidence, evaluation, prediction, and feedback have real meaning for understanding what the teacher is doing. It is doubtful that they have similar meaning in the interactive setting.
>
> ...Again it is necessary to point out that the distinctions being made here are not intended to suggest that the teacher merely "plays it by ear" when he steps in front of a class. Surely there are times when he must decide on his feet between alternative courses of action. But he often acts without the sensation of having made a decision, and the grounds on which he bases his interactive decisions are often quite different from those governing his preactive behavior...(8)

Dr. Jackson's analysis helps us put into perspective some of the conflicting notions of how teachers will function in the changing school scene. Clearly, the previously "hidden" side of teaching is destined to become more and more visible. In a systems approach the preactive or planning stage is crucial, and teachers will be called upon to prepare and plan far more consciously and *analytically* in terms of the feedback information that will circulate the system. This will be one dimension of their teaching style. It will be problem-solving, decision-making in nature, carrying them through such component activities as (1) defining instructional goals and objectives; (2) developing assessment criteria and methods of determining outcomes; (3) diagnosing students in terms of their individual needs, progress towards objectives and learning styles; (4) prescribing for individual students and then setting the stage for their instruction by preparing materials and organizing their learning activities, and (5) deciding teaching styles and strategies most appropriate to given ends for given students. Many of these decisions will be made in a team-planning environment where a pool of diverse specialist knowledge will enrich the planning base. Still there will need to develop viable patterns for decision-making amid the interplay of personalities and the wide range of work styles. Undoubtedly, teachers will have much to learn in promoting their performance in this preactive phase of teaching.

But Dr. Jackson is not about to ignore the interactive or operational stage of the teaching system just because we must intensify our interest in the former. By showing how the teacher's interaction with students operates as a ***responsive style*** of behavior to the immediate feedback he receives from the group and the teaching situation, Dr. Jackson puts a particular importance on developing this area of teacher competency as well. His attention is, of course, well in tune with current research and teacher training in processes of systematic classroom observation that have been pioneered by a host of educators such as Flanders, Amidon, Medley, Mitzel, Hough, Soar, Bellack, Gallagher, Aschner, Smith, Kounin, Ryans, Ober, Moskowitz, Withall, Brown, Furst, and others. It is these men and women who have put "teacher watching" on a scientific basis and have provided teachers with the tools they need for assessing their own behavior rather than having to depend upon the observations of others.

By differentiating preactive and interactive teaching more clearly, Dr. Jackson points the way for defining the final stage of a functional system, i.e., the *evaluative* phase. In this stage the teacher examines retroactively the teaching cycle to make judgments about it. If we utilize the definition of "feedback" in *Webster's Third New International Dictionary:* "the return to the input of a part of the output of a machine, system, or process as...information that reports discrepancies between intended and actual operation and leads to self-correcting action...(or) the partial reversion of the effects of a given process to its source or to a preceding stage so as to reinforce or modify it." the role of teachers as potential system modifiers becomes evident. Teachers in the future will have to assume a greater responsibility for evaluating the results of their efforts. This means they will have to *interpret* the feedback they receive about pupil performance against the long-range and short-range goals they have assumed, against the human-financial costs accrued, and against the processes they have employed to attain their product. They can then translate these judgments into suggestions for changing the system so that it may operate more productively in the future. This retroactive style of teaching will call for greater objectivity on the part of teachers as well as deeper personal conviction of their own worth as professionals because here they will be called upon to evaluate not only others but *their own behaviors in the process.* When teachers can see and interpet "the whole picture" of teaching—themselves included—they will be able to share as change agents towards the attainment of new models of behavior for themselves, their colleagues, and their charges.

IV. APPLYING THE MODEL OF TEACHER BEHAVING STYLES TO INDIVIDUALIZED INSTRUCTION

Perhaps we have already begun to answer the question, "Who is the teacher in individualized instruction?" We might say he is an *individual,* a complex human composite, called upon to perform in a variety of behavior styles acts appropriate to the preactive, interactive and retroactive phases of teaching. But "what does he do, and how does he come to do it?" These questions cannot be answered without a clarification and definition of the term "individualized instruction" itself. Glenn Heathers, professor of educational research at the Learning Research and Development Center of the University of Pittsburgh, where the notable program of individually prescribed instruction (IPI) is being developed, provides a description and amplification of the concept of individualized instruction in the outline below:

INDIVIDUALIZING INSTRUCTION: GENERIC DEFINITION AND MODEL FOR TEACHERS

A. *Definition:*
Individualizing instruction consists of designing and conducting with each student programs of studies that are tailor-made to fit his learning needs and his characteristics as a learner. This calls for guiding each student's progress, month-by-month, week-by-week, and day-by-day, in terms of learning "prescriptions" made especially for him.

B. *Modes of individualization:*
1. Vary the learning goals from student to student (different tasks, or different objectives within a task)
2. Vary learning materials and equipment from student to student
3. Vary the learning setting from student to student
* 4. Vary the instructional methods from student to student
* 5. Assign different students to different teachers to achieve best match-ups
6. Vary the rate of advancement from student to student (usually called non-grading)

C. *Settings for individualization:*
1. Independent study (using texts, workbooks, tapes, doing projects, etc.)
* 2. Tutorial (with a teacher, older student, peer, parents)
3. Pupil-team (as in Durrell's plan)
* 4. Small class
* 5. Usual-sized class
* 6. Large class
* 7. Subgroup in a class working under teacher's guidance

D. *Teachers' model for individualization:*
This 8-step model is offered as an ideal to be attempted with any sort of learning task, whether the learning of a skill, of information, of concepts, of competencies in conducting individual inquiry, or competency in group activities.

1. Specify the objectives of learning task in terms of student behaviors
2. Select or devise instruments and procedures of measuring achievement of each specified learning objective
3. Pretest the student to determine the extent to which he already has achieved the objectives of the learning task
4. Diagnose the student's characteristics as a learner in relation to the task
5. Prescribe for the student specific learning activities for mastering the task
6. Select learning materials and equipment the student will require
7. Plan how to conduct one's instruction in terms of the individual prescriptions
* 8. Conduct the individualized instruction, revising prescriptions as needed. (9)

A cursory reading of Dr. Heathers' analysis seems to reinforce the idea contained in some of the definitions cited above and in Dr. Jackson's preactive phase that individualized instruction calls for teachers to perform (with enormous skill and regularity) the special kind of problem solving needed to tailor instruction to the single child. This is, of course, true, and the implications of such a change in teacher behavior are monumental. But it is not the whole issue.

Look again at Dr. Heathers' defining model. At least eight items point directly to considerations of teacher behavior when *they are immediately involved with students* i.e., the INTERACTIVE phase of teaching. (These have been marked by asterisks, mine). An analysis of these separate items indicates three kinds of issues to be faced in individualizing at the interactive level:

1. Matching teachers to different students (item B5)

2. Matching teachers to different instructional settings (items C2, 4, 5, 6, 7)

3. Matching teachers to different demands in executing instructional prescriptions (items D8 and B4)

Item 1, matching teachers to different students, is based upon the hypothesis that certain students will perform better in school if they are taught by teachers with whom they are compatible. This may be as simple an expediency as placing a child with a male rather than female teacher, or with a mature rather than a young one. But matching teacher and student has been attempted on far more sophisticated levels than this. Herbert A. Thelen's monumented study of "teachability grouping" attempts teacher-pupil placements on the basis of conditions required for more effective teaching and/or learning. "In other words, it starts with the proposition that the particular 'personalities' in the group are in fact, important given conditions which have a great deal of influence over the nature and productivity of classroom experience." (10) Dr. Thelen's study, while oriented to teaching as a group process, comes to grips with the factors of teacher-pupil personalities, expectations, work styles, and values as they operate to facilitate the interactive process or to inhibit it.

Item 2, matching teachers to different instructional settings, recognizes the vast changes that have already taken place in structuring the educational environment for students and proposes even greater modification. Individualized instruction, of course, presupposes abolition of the 30-to-1, boxed off ratio of traditional classroom patterning. But it does not, by the same token, intend to substitute a one-to-one tutorial system, as some have interpreted the word "individual" to imply. Individualized instruction focuses upon the single child personally in diagnosing, prescribing, and assessing his learning progress, but it does not say he can only learn best in a single relationship with

the teacher or in a single setting. Prescriptions for his instruction may call for a variety of size groups—from one to perhaps a thousand in number, depending upon the nature of the activity—and for a variety of settings—laboratories, seminars, auditoriums, studios, workshops, etc.—depending upon the skills, processes, or content to be mastered. This shift in structuring the environment will call for a wider range of teaching expertise than has been heretofore expected. Teachers will not only need training in their subject areas and teaching levels, but they will also require more know-how in the specialized dynamics of varied group modes and in the special technology and processes of differing instructional settings.

Item 3, matching teachers to different demands in executing instructional prescriptions, increases the possibilities for differentiated staffing as a part of individualizing instruction. Whereas the previous references to teaching responsibilities point to greatly expended professional expertise, the idea of separating the planning of instruction from the actual execution of instructional plans suggests ways in which less-than-professionally trained individuals may also function profitably in education. This seems like a paradox, but the fact of the matter is that many tasks formerly in the teacher's sanctum are being efficiently performed by paraprofessionals, technicians and (heavens forbid!) machines. Individualized instruction carries this trend one step further and ideally requires that the prescription drawn for a child specify the person (professional or paraprofessional) or the machine (a program package, a computer, an audio-visual aid, or perhaps simply a book) best calculated to facilitate the student's learning at the interactive moment. Thus, in a team approach teachers might more naturally operate to their individual strengths and personal preferences, but they would perform only those interactive tasks in carrying out the child's personal prescription which require their special professional training or talent. If a task could be efficiently performed by a sub-professional or a mechanical device, it would be so assigned. Moreover, as the "packaging" of learning materials for pupils becomes more and more expeditious in design and format, the scope of activities which students can carry on for themselves or with minor personal assistance will become ever more numerous. Thus freed from the burden of mechanical operations, the teacher will be able to devote himself selectively to the duties which truly demand his level of professional skill.

V. CATEGORIZING THE COMPONENTS OF TEACHING STYLE

To what degree will it be possible to match the teaching individual to the interactive task? By what criteria will we make the judgment that Activity "A" for child "B" is best facilitated by Teacher "C?" Let us for the moment assume that the preactive steps of diagnosis and prescription have already taken place for an individual child, how next can we make selections from among the available teachers and aides on a team (or even the available teaching machines) the one most suited to the child and the activities he will pursue?

One basis for the matching is fairly obvious: specialized know-how or expertise. Teachers, aides, technicians, machines or computers will have to be "profiled" according to what they do best, and assignments made accordingly. But this alone would not suffice. It is not only *what* the teacher does that makes a difference with students but *how* he does it. For this "how" of the teacher's operation, we need also to delineate components of "teaching style."

Figure II, *TEACHING STYLE CLASSIFICATION SCALE,* (see page 11), attempts to categorize certain variables which contribute to a teacher's individual "style" when he is directly involved with pupils' learning activities. The scale proposes five separate categories and five-points

Figure II. TEACHING STYLE CLASSIFICATION SCALE

TEACHER CHARACTERISTICS PROJECT
Dade County Department of Instructional Research, Development and Evaluation

Name . . . . . .Name of Rater . . . . . .

School . . . . . .Position . . . . . .

Teaching Assignment . . . . . .Date . . . . . .

The attached instrument describes factors which appear to contribute to a teacher's individual instructional "style." It focuses upon the interactive phase of instruction when teachers are directly involved with pupils' learning activities. The categories indicated and the gradations within each category describe a wide range of teaching behavior. No item on any scale is "good" or "bad" in itself. The flexible teacher would be capable of the composite *"teaching style" most appropriate to the specific instructional situation involved*—that is, the precise learning objectives sought for individual pupils through selected activities at a particular point in time.

DIRECTIONS: The attached scale consists of five categories: (.10) INFLUENCE, (.20) MANAGEMENT, (.30) RELATEDNESS, (.40) TONE, (.50) OPERATIONAL LEVEL. Within each category, five gradations of a behavioral continuum are shown (.11–.15, etc.) Operational definitions for the extremes of each continuum are given to the left and right of the category.

Please select *one item for each category* which best represents the behaving style of the teacher you have observed. Mark your selection on the duplicate scale shown below by circling the appropriate number. *(You will circle five items in all, one in each category.)*

	←-----BEHAVIORAL CONTINUUM-----→				
Category					
(.10) INFLUENCE	.11	.12	.13	.14	.15
(.20) MANAGEMENT	.21	.22	.23	.24	.25
(.30) RELATEDNESS	.31	.32	.33	.34	.35
(.40) TONE	.41	.42	.43	.44	.45
(.50) OPERATIONAL LEVEL	.51	.52	.53	.54	.55

	← ←	← ← .10 INFLUENCE → →		→ →	
INFLUENCE	.11 Extremely Indirect in Influence	.12 Somewhat Indirect in Influence	.13 Influencing Style Not Discernible	.14 Somewhat Direct in Influence	.15 Extremely Direct in Influence
MANAGEMENT	.21 Extremely Informal in Management	.22 Somewhat Informal in Management	.23 Management Style Not Discernible	.24 Somewhat Formal in Management	.25 Extremely Formal in Management
RELATEDNESS	.31 Extremely Personal in Relationship	.32 Somewhat Personal in Relationship	.33 Style of Interpersonal Relationship not Discernible	.34 Somewhat Impersonal in Relationship	.35 Extremely Impersonal in Relationship
TONE	.41 Extremely Intense in Tone	.42 Somewhat Intense in Tone	.43 Atmospheric or Tonal Style not Discernible	.44 Somewhat Subdued in Tone	.45 Extremely Subdued in Tone
LEVEL	.51 Extremely Concrete in Operations	.52 Somewhat Concrete in Operations	.53 Style of Operational Level not Discernible	.54 Somewhat Abstract in Operations	.55 Extremely Abstract in Operations

INFLUENCE

INDIRECT, FACILITATING, PUPIL-SUPPORTIVE
- Encourages pupils to talk, express opinions, articulate feelings in class
- Makes frequent use of questioning; asks extended and divergent questions
- Listens to, accepts, praises, and builds upon pupil ideas and divergencies
- Uses inductive, heuristic approaches; allows time for pupil trial and error
- Enables students to share in planning and evaluative processes

DIRECT, DOMINATING, TEACHER-CENTERED
- Does a large proportion of the speaking in class
- Uses lecture, explanation, telling extensively
- Makes frequent and extended use of direction giving
- Asks convergent type questions; supports convergent responses more than divergent
- Discourages irrelevant questions and ideas; sticks to the subject
- Uses deductive approaches and explicit methods of connecting elements
- Assumes most of the responsibility for planning and evaluation

MANAGEMENT

LAISSEZ-FAIRE, LOOSELY STRUCTURED, INFORMAL
- Plays the situation "by ear" with a minimum of proscriptions or prescriptions; establishes rules *ad hoc*; form follows purpose
- Permits a maximum of movement and change to enter the situation
- Chooses procedures, methods, materials as activities progress and interest develops
- Permits the individual to gravitate to and from emerging groups as needed
- Discovers patterns "after the fact" or intrinsically rather than imposing them externally
- Permits activities to cease without necessarily achieving summation or completion
- Encourages variety of style and format

BUSINESSLIKE, TIGHTLY STRUCTURED, FORMAL
- Establishes and follows procedures systematically; pursues objectives methodically with a minimum of situational adjustments: form precedes purpose
- Establishes rules of behavior or operation and sticks by them consistently
- Plans ahead to account for as many variables as possible
- Facilitates orderly movement from task to task, operation to operation, place to place, group to group
- Values smoothness and efficiency of operation, seeking maximum gain for effort expended
- Encourages uniformity of style and format

RELATEDNESS

PERSONAL, CLOSE, INTIMATE, INVOLVED
- Is basically pupil oriented in plans and procedures
- Reacts personally to student effort: actively praises or criticizes, encourages or rejects
- Responds to pupils on an emotional level: is happy or sad as they are, adopts their excitements, apprehensions, etc.
- Encourages and elicits pupils' subjective point of view, feelings, reactions
- Enters student activities as a participant or contributor

IMPERSONAL, DISTANT, DISINTERESTED, UNINVOLVED
- Is basically task oriented in plans and procedures
- Concentrates on objectives rather than people; shows concern with things to be accomplished or objects to be dealt with
- Remains emotionally neutral; does not praise or criticize; support or reject students' efforts on a personal level
- Encourages an impersonal, objective tone in teacher-pupil interchange
- Stays removed from student activity, is an onlooker or facilitator

TONE

INTENSE, DRAMATIC, SURGENT, "HOT"
- Uses broad range of vocal effects and volume
- Stimulates rapid or shifting pace in interactive process
- Dramatizes or acts out ideas, feelings, impressions
- Uses media that tend to "stir up," warm the atmosphere
- Combines a variety of media to stimulate multiple sense responses
- Moves freely, actively, vigorously

SUBDUED, QUIET, RESTRAINED, "COOL"
- Uses low tone of voice and measured pace
- Uses a minimum of vocal variety or dramatic effects
- Uses non-vocal, soundless means to communicate certain ideas where appropriate
- Uses stimuli that tend to "cool" the atmosphere
- Encourages pauses and silences in the interactive process
- Facilitates private tasks where appropriate
- Facilitates one-to-one dialogs where appropriate
- Moves about softly with care and precision

LEVEL

CONCRETE, EXPERIENTIAL, MOTOR
- Deals with specifics: material objects, recognizable parts, practical applications
- Shows directly how things are operated, put together, performed, experienced
- Encourages manipulation, bodily movement, doing
- Uses words technically and denotatively; encourages expressing ideas explicitly
- Utilizes the sensory and psychomotor approaches to learning
- Draws upon the lower range of the affective and cognitive taxonomies: receiving, responding, knowing, comprehending, applying–concrete, convergent thinking

ABSTRACT, SYMBOLIC, VERBAL
- Deals with abstractions: concepts, ideas, generalities, ideals, principles, theories
- Encourages the mental recreation and symbolic representation of reality; fosters imaginative entry into experience
- Uses words in connotative and figurative dimensions; tolerates ambiguity and suggestion; fosters implicit and multi-level relationships
- Utilizes the verbal and intellectual approaches to learning
- Draws upon the upper range of affective and cognitive taxonomies: valuing, analyzing and synthesizing–divergent and evaluative thinking

on a continuum within each category. Each category is fairly discrete, but the factors should be seen as operating in organic relationship to one another at any specific point in time or in any particular setting. Category .10 specifies the gradations of *Influence* teachers exercise over pupils. Category .20 deals with the kind of procedural or *Management* style the teacher maintains in the classroom. Category .30 describes the degree of personal involvement, or *Relatedness,* which the teacher reveals in working with students. Category .40 deals with the *Tone* or intensity level of stimuli employed. Finally, category .50 defines the *Operational* level or degree of cognitive abstraction which is maintained. Definitions to the left and right of each category describe the extremes of each continuum, but no value judgments are implied by the gradations. An item on any scale is neither "good" nor "bad" in itself; rather it should be looked upon in terms of its appropriateness to the child's individual learning style and specified objectives at the moment.

All of us can think of specific teachers who operate successfully with youngsters in extremely differing style patterns. There are some teachers whose tone is always subdued, low-keyed, restrained; a quiet calm permeates their classroom. On the other hand, some teachers fairly bombard their students with stimuli; their classrooms go! Each can be very effective; *but their limited style is not always ideal for every child in the group.* Another example—computer assisted instruction yields extraordinary results for some youngsters, yet others do not thrive with such a "teacher." Can it be that some youngsters need the personal involvement of a human being who cares? Finally, it can be demonstrated that problem-solving, discovery-oriented learning is noticeably fostered by an indirect, supportive, non-controlling style of instruction. But who would want to "discover" how to dismantle a live bomb? Direct teaching often has its place.

In fine, it would seem that teaching style components need to be specified for the instructional activities drawn for individual youngsters. The teaching style that undergirds an activity may be just as definitive in determining its potential value for a child as any other factor of material, content, or process. Needless to say, a small group discussion prescribed as a free, divergent interchange among peers does not fulfill its objective if the teacher narrowly controls or limits the proceedings.

An instrument such as Figure II might, consequently, serve three general purposes in individualizing instruction: First of all, selected components might be specified to delineate the teaching style required for student "A" in a specific activity. If he were a socially immature five-year-old working on the relationship between numbers and objects, he might need a .12–.32–.51 teaching component. That is, the teacher would have to allow much time for discovery, trial and error (.12); however, the child would want the teacher close and personally involved, caring and concerned but not smothering him with attention (.32); finally, the teacher would have to make certain that the child's experiences were kept on the concrete, manipulative level so that all his senses, his whole body, so to speak, were involved in learning (.51). The other levels of .20 management and .40 tone, might also apply, but these three items were isolated for illustration. Clearly such a teaching style would not be appropriate to a highly verbal, self activating graduate student undertaking a complex unit in theoretical physics!

The second application of the *TEACHING STYLE CLASSIFICATION SCALE* would be as a measure of the teacher's actual performance in a prescribed style. Suppose style .12–.32–.51 were actually specified, it would then be important to ascertain whether or not the assigned teacher had actually performed in the desired way. There are presently instruments for assessing such factors as influence (the Interaction Analysis Category System, among others) or operational level (i.e., The Florida Taxonomy of Cognitive Behavior). Scales for teacher-pupil involvement, for management patterns, and level of media are likewise possible with minor adaptations. If teachers were alerted to the kinds of behaviors they were expected to demonstrate, they might then utilize other instruments to ascertain their congruences with the operational definitions or gradations specified.

A final usefulness of the *TEACHING STYLE CLASSIFICATION SCALE* would be in the area of developing general flexibility of performance. While there is no "model" of the ideal teacher, research by Flanders and others underscores the importantce of flexibility and a wide variety of teaching behaviors in the teacher's repertoire. Flanders described the "high achieving" teacher as one whose classes showed demonstratable learning progress and a high degree of positive morale. Teachers of such classes tended to exercise flexible control of the learning situation, i.e., their behavior ranged over a wide variety of interaction patterns, and they were able to modify their behavior to changing conditions of the pupil-task-setting components of the lesson. "Low-achieving" teachers by Flanders' definition were not so successful in accomplishing pupil progress and satisfaction in learning. Their learning style tended to be limited to a narrow range of teaching patterns which were employed over and over again with little change for varying students or situations. (11)

In using the *TEACHING STYLE CLASSIFICATION SCALE* it might be hypothesized that *all* teachers should be able to perform along all points of the continuum for each category as needed, but quite likely such an ideal of flexibility would rarely occur. The input characteristics of individuals–their aptitudes, personality, values, prior training and experiences, etc.–would mitigate against certain teachers ever attaining the extremes which certain continuums propose. However, nearly every teacher could quite reasonably attain a *wider range of behaviors* within each category. Teachers could learn to be more or less direct in their controls, to modify their degree of formality, to become more empathetic or establish greater distance with their students, to liven up their style or tone it down, to move up or down on the concretion-abstration ladder. Many inservice projects, in fact, are beginning to concentrate on such precise elements for teacher improvement rather than using the traditional subject-content approach. As teachers and other instructional personnel master an ever increasing range of behaving styles, it would not be necessary to search out a specific teacher able to perform in a prescribed way. Instead, any teacher would "select" from his own wide repertoire of behaviors the style appropriate for the conditions at hand.

Nor is this ideal of responsive flexibility relevant to human teaching instruments alone; it is the goal of research on computer-based teaching systems to design greater "flexibility" into instruments so that the machine will also "be capable of modifying its own mode of instruction during the course of a training session." (12) Machine level of flexibility is still rudimentary, but numerous instruments can already branch for the following reasons:

1. Characteristics of student response–the promptness and/or definitiveness of his reply.
2. Nature of response–was it right or wrong, what specific errors were committed by the student.
3. History of student learning behavior–his previous response pattern, problem areas, and reading rate.
4. Relevant student personal data–his IQ, sex, personality, aptitudes.
5. Nature of subject matter.
6. Degree of student motivation.
7. Student-generated requests for re-routing. (13)

The possibility of machines also adapting their "teaching style" surely cannot be too remote!

VI. MAKING THE SYSTEM WORK: THE IMPLICATIONS FOR STAFF DEVELOPMENT

The Dade County Department of Research, Development and Evaluation has been working on a five-component design for individualizing instruction comprising goals, activities, assessments, pupils, and teachers. As an instructional system these elements must be interrelated and interoperational. The teacher component to this system is somewhat unique because the teacher's functioning is partially external and partially internal to the system. On one hand, the teacher exercises certain external controls which can determine whether or not the system itself will work–essentially whether the "idea" of individualized instruction will become something more than an idea and whether the plan on paper will ever become a working reality. Like any project that contains human elements, this Instructional System Project, as it is called, must be able to count on support and cooperation by *human beings* to make it go. No matter the new trappings, the business of education still remains primarily a human system. And this brings up the internal role of the teacher. Because the elements of the individualization project must be dependent upon a tightly functioning information process and decisions necessarily based upon data flowing from a multiplicity of sources, the teacher himself will to a degree be manipulated by the system itself. Information flow will determine how teachers are used in carrying out prescriptions, how teacher time is to be allocated, where talents are most readily employed, when, even, the teacher is to be replaced by a machine. Whereas, the teacher has never really been a *free* agent in education (remember, we have always called it a school *system*), there is every possibility of creating a monster that overwhelms the teacher by sheer internal momentum and force.

This latter condition certainly is not intended and need not be. On the contrary, the instructional system is meant to *free* the teacher, to provide him with the means of attaining the greatest degree of satisfaction and success in teaching! If it does not free teacher and student, to what end is it dedicated?

Ultimately, the success of the system will largely depend upon how teachers are inducted to its implementation. This is the realm of education–preservice, inservice or continuing. The question that might be put to planners of teacher training is this: "How would you educate teachers to perform in a school that is a laboratory?" The laboratory symbol is useful, because the model of the individualized school most closely resembles Dr. Jackson's problem-solving milieu where the teacher is the key to the experimental, diagnostic-prescriptive, decision-making pattern which prevails. This experimental attitude extends not only to decisions about students but to the teacher's behavior as well.

Defining the effective teacher as a "laboratory" teacher means that he functions empirically as an *effective instrument for his own self improvement.* The experimental teacher is process oriented; he employs a method of discovering what good teaching is. His competency lies in his capability for change, his capacity to "become":

I. KNOWLEDGE–The laboratory teacher *KNOWS* what he is doing. He has access to the information needed to be an effective decision maker, and he uses this information well.

   A. He makes decisions cirtically: He exercises choice over the widest possible range of alternatives.

   B. He makes decisions creatively: He goes beyond the present range of choices to suggest new alternatives.

II. COMMUNICATION–The laboratory teacher can *DESCRIBE* what he is doing. He is able to use a precise language of teaching behavior.

A. He is master of a storage and retrieval system in terms of words and symbols that denotatively express what is happening in the instructional process.

B. He can manipulate the instruments that efficiently manage information in a complex instructional system.

III. ACTION—The laboratory teacher can *CHANGE* what he is doing. He is able to plan some activity, to carry it out, then decide whether it works. He uses a *feedback system* as a self-directing change agent.

IV. EVALUATION—The laboratory teacher can *LEARN* from what he is doing. He can observe teaching behavior objectively. He can use tools and instruments to help him describe accurately. He can learn from his behavior and that of others.

V. COMMITMENT—The laboratory teacher can *FIND SATISFACTION* in what he is doing. He believes in the empirical approach. He nurtures his "disinclination to certainty." He welcomes change as a challenge, not a threat.

If the laboratory teacher is to emerge as the model for all teachers, significant changes need to take place in many aspects of the continuing education of our instruction staffs. If it is true that we teach as we have been taught, then educational institutions must begin applying the principles of individualization to their training of the teachers, new and experienced, so that this mode may be transferred into the teaching behaviors of the future. After all, if individualization is valid for youngsters, it should also apply for the grownup learners as well.

What might this mean in terms of staff development? In planning staff development programs the following components need to be specified:

1. *Characteristics of the learner* (here the teacher) need to be more seriously explored. Teachers need to ask more deeply such questions as "Who am *I* approaching this new teaching-learning situation? What do I bring to the task? What are my strengths, my talents, my deficiencies? What should I know about myself that might affect the decisions I need to make in this learning situation?" Consultants and leaders of the training also need to approach the group with this personalized attention to their differences and uniqueness as individuals.

   At the 1968 inservice workshop of Dade County Neighborhood Educational Cultural Centerette, the R.D.&E. laboratory school for early childhood, this approach was tried by suggesting ways in which teachers might study their own characteristics. During the course of the workshop the participants took six test instruments descriptive of their values, attitudes, abilities and personality, and then privately studied their own profiles as very complex, very special human beings.

2. *Objectives* of the training program need to be specified, and teachers need to participate in defining the objectives. Suppose we would say, "What is it that we really expect teachers to *be able to do* as a result of this workshop?" how often might we realize that our proposed training had no clear purpose at all?

3. *Assessment* needs to be integral to the learning experience. If youngsters vary dramatically in their progress toward objectives, how much more likely that adults would differ in their status along lines of growth. Yet many courses begin as if every participant were an absolute novice; still others presume entering behaviors which are just not

present. Greater attention to assessment would reveal the paths individuals need to take and some of the distance they need to go. On the other hand, it would also reveal accomplishments that could be put to use in participants' helping each other during the learning experience. The Centerette's summer workshop, mentioned above, defined its objectives and then constructed a self-survey for teachers in terms of these intents. As the results were studied, small groups of participants were grouped for intensive specialized sessions. The leaders of these individualized training sessions were in a number of cases participants themselves who had previously gained expertise in the particular objective.

4. *Leaders* of the training must function as facilitators. They, in fact, should model the ultimate function which teachers in individualized education fulfill, i.e., to free the learner by aiding him to become increasingly self-confident, self-generating, self-evaluating and self-directing. The leader must cultivate a spirit of authenticity in the classroom where the emotional climate is encouraging, supportive, open, "real." Dr. David Aspy, professor of education of the University of Florida, who headed the consultative team for the Dade County 1967 Pilot Inservice Summer Workshop, defines the encouraging climate through four characteristics: (a) Empathy or understanding, (b) Self disclosure or sharing, (c) Congruence or genuineness, (d) Positive regard or respect. One of the questions specifically examined during the 1967 pilot study was "the relationship between changes in teachers' classroom behavior and facilitative atmosphere provided by supervisory and consultant personnel. The...hypothesis was that the teachers' classroom behavior could be altered significantly in a climate which did not coerce but rather encouraged their own exploration..." (14) All of the supervisory and consultant personnel for the workshop were interviewed by two qualified psychotherapists, and each was evaluated as functioning interpersonally at or above minimally facilitative levels.

5. *Learning Activities* need to be clearly differentiated between content and process. While one would not negate the importance of information, theory and subject matter is input to any good learning situation, the educative experience that stops short with "knowing what" is fundamentally incomplete. The teacher must experience the "knowing how" of his craft, and this comes about in the process of putting ideas and theories to work. It is not enough for teachers to know about instruments for systematic classroom observation; they must practice using these tools in real or closely simulated situations. It is not enough for teachers to focus upon some goal of personal improvement ("I ought to ask more challenging questions."), they must also experience the sheer struggle of trying to do what one intends and then measuring the congruence between intention and action. It is not enough for teachers to philosophically commit themselves to the diagnostic-prescriptive teaching process, they must *live it through,* step by step, again and again, day by day, to really assimilate it in behavior. A laboratory is a place where you test out your guesses, and teacher training situations must be action-oriented to this end.

6. *Learning Settings* must be totally geared to the multi-media environment of tomorrow's school. We say that the teacher needs to use the media, the computers, the electronic potential of education, yet we immerse him in the same lecture-listen pattern of the medieval world. Could he not be learning through a programmed package? How about hooking him into the computer and letting him converse with "it?" Why not let the video-tape "observe" his performance? Why can't he pick and choose a sequence of explorations from an array of tapes, movies, filmstrips, slides? Why can't he submit his final exam as a slide-tape demonstration of his expertise?

7. *Learning Decisions* must become increasingly self determined. Within any course, workshop and program, participants need to be encouraged to make their own decisions

and direct their own progress. This starts with defining their individual instructional objectives and criteria of performance. Self analysis of their personal "learning styles" can be translated into activity choices over a wider range of media and materials. Self scrutiny in terms of readiness for certain tasks or completion of others needs to take place. Teacher-learners might select their own organizational patterns for accomplishing goals and move to sites or settings when conditions are most compatible to their own purposes or preferences. A fundamental premise of individualization is that it will promote a greater self direction. We must provide means for this to come about.

8. *Evaluation* needs to be made in terms of behavior change. The criterion must be, "What is this individual able to do now that he could not do when he started?" It is no use boasting about "our splendid workshops" without examining the evidence. What are the observable effects? What are the products? It is no use bemoaning the failure of the colleges to prepare teachers without specifying the results we expect. Since many of the effects of teacher education are not immediately observable, we must also assess the long-range results of training. Both the training process and the evaluative process should be ongoing and should take place in a climate of increasing support and authenticity where the teacher's growth to self determination can take place. In the long run, the only practical evaluator of teaching performance is the teacher himself.

9. *Continuity* must be maintained by carrying the training experience from an initial workshop or introductory setting to the ongoing operational situation. That is, the change-committed teacher must continue to receive help and support when he goes about applying his newly-learned behaviors in the day-by-day "real" world of instruction. To provide such continuity, highly skilled "trainers of teachers" must be available at the school level to be an ongoing resource in staff development. The first order of business would therefore seem to be the training of such leadership personnel. Only with the increased expertise of team leaders, department chairmen, master and helping teachers, curriculum specialists, inservice coordinators, administrators and the like can staff development be a continuous process.

VII. MAKING THE SYSTEM WORK: THE IMPLICATIONS FOR STAFFING

In the beginning of education there were just these two: the teacher and the learner. With the institutionalizing of education, complicated hierarchies in authority and interlacing networks of specializations have proliferated. Modern school staffs for whom indvidualization is the goal seem to be developing a more viable structure—teaming—where instructional personnel can function in dynamic rather than fixed relationships. Teamwork has broadened the staffing structure in two ways. It has added paraprofessionals and other auxiliary personnel to instruction by assigning them legitimate roles in differentiated staff design. Secondly, it has made it possible for team members to move in and out of a number of roles associated with cooperative planning, implementation and evaluation of instruction so that decision-making is more broadly based and responsibility more freely distributed than ever before. Leadership is not necessarily a position in teaming but rather a role, often to be designated or assumed situationally. The leader of one team project may be the neophyte or fledgling in another. The technician may be as highly degreed as the specialist teacher, but his assigned decision-making responsiblities lie in the area of his technical expertise, and the teacher's in his. Each specialist is seen as having a role, probably a number of roles, in the combined expertise of the team which cooperatively functions for the benefit of the individual child and cooperatively shares responsibility for him.

As role dimensions for the team are differentiated, behaving style profiles for each role can be delineated in terms of the preactive, interactive, and retroactive phases entailed. The stylistic

differences begun in Dr. Jackson's "The Way Teaching Is" need to be extrapolated into behavioral profiles for the role of leader, neophyte, paraprofessional or others operating on the team, expanding the model of performing style to the total staff structure. This third dimension of Role is added to the general conceptual structure of teaching in individualized instruction in Figure III, *A MAN-MACHINE MODEL OF INSTRUCTIONAL BEHAVIOR.* (See page 19). The Classifications of Output Role Behaviors shown on the lower right-hand portion of the diagram are described below:

1. *Leadership* roles may be descriptive of those who assume or are assigned authority for decisions involving the group as a whole. Leaders project, initiate or foster activity that culminates in broad decision-making and structuring of the procedures. Leaders are points of responsibility for communication, liaison, and morale which involve the group itself and integrate the group with the efforts of others. Within the team there may be a number of assigned leadership roles, from the principal, heading the total school team, to the team leader, integrative of a smaller group, or leader of a specialized function such as inservice. But within teaming, the role of leader may shift freely and often. Any team member with special talent or interest may move into the leadership of a specific project or segment of the program. Individuals might move in and out of leadership roles as needed.

2. *Consultant* roles are fulfilled by persons who move into a team to provide special limited focus for its problem solving. The consultant might be a team member himself who has specialist know-how on the problem, but often it is a relative outsider whose expertise is needed for a short, somewhat concentrated assault upon some situation. The consultant ideally should facilitate the process of solution rather than provide the solution itself.

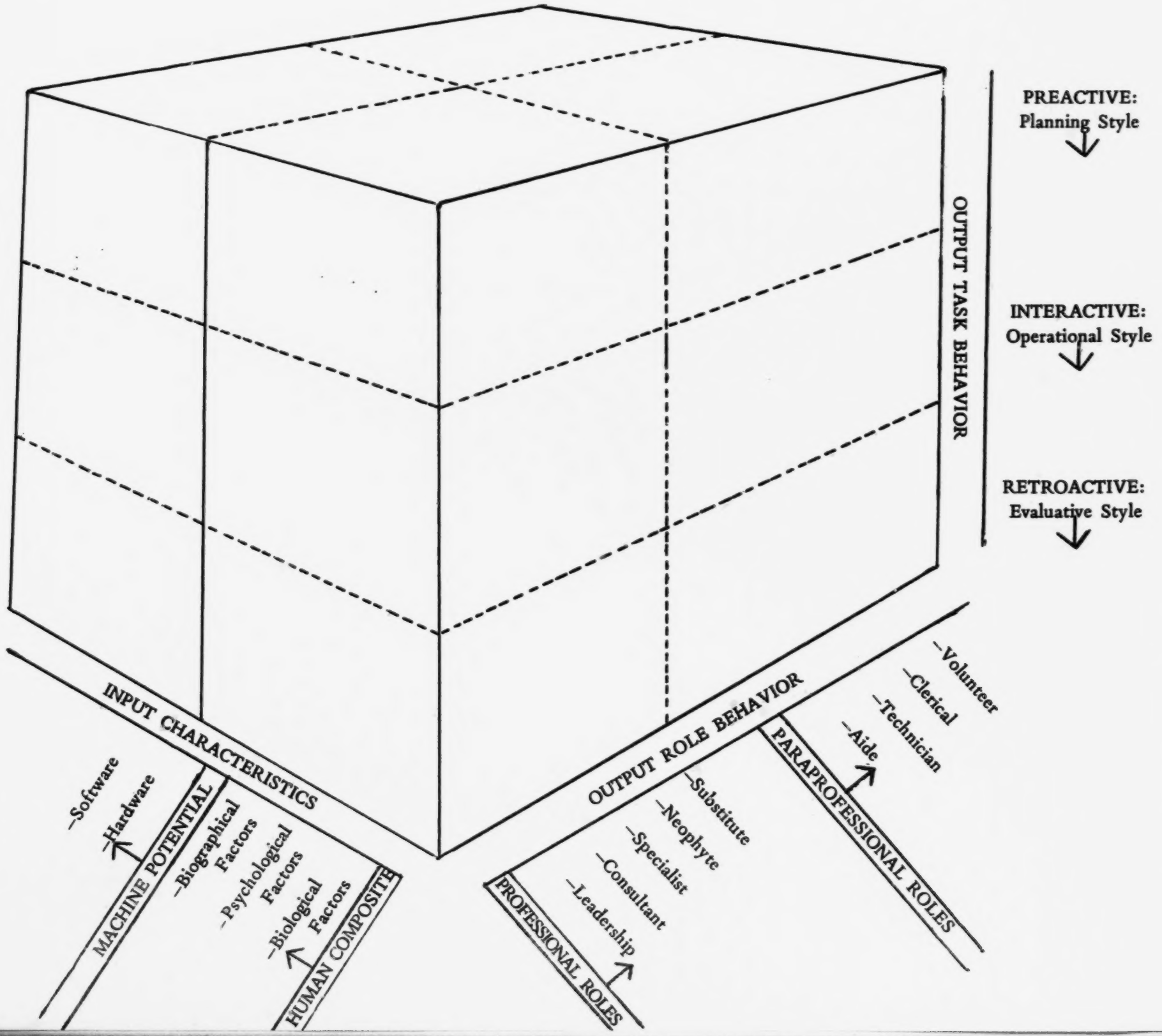
3. *Specialist* roles are performed by all the professionals on the team as they cooperate to make and implement knowledgeable decisions about youngsters. Each member contributes his unique competencies and specialties toward the coordinated goal of individualized instruction. The distinction between teaching staff and guidance staff, for example, is no longer viable in terms of "Who is responsible for the child?" Guidance, child development and medical personnel are not seen merely as trouble shooters for a few particular youngsters, but rather serve the total team as specialists most particularly qualified to delineate the individual characteristics of all youngsters, in promoting their instruction. Teachers' specialties might be sub-differentiated in terms of many factors beyond subject or level, such as a small-group specialist or a learning-lab specialist. Other specialists would serve the youngster in linking the home community as a learning environment to the school's learning environment. Leadership, professional, and paraprofessional personnel all have specialty roles in the total team.

4. *Neophyte* roles are assumed by any members when they are functioning in a learning capacity on the team. Preservice or inservice interns are the most obvious persons who fulfill this role, but the novice teacher must also be given limited decision-making responsibilities commensurate with his need to learn. At any point in the team's evolution when something new is injected, any member might shift into the neophyte role as his orientation to the change-charged factor proceeds.

5. *Substitute* roles are limited contingencies to replace participants who are not available to perform certain tasks. In a interoperating team the need to import a substitute as a staying action for groups of children may not always be so pressing. Team members and machines can be moved in and out of many situations to provide for the youngsters' high level of uninterrupted learning.

6. *Paraprofessional* roles are probably best distinguished in terms of their *limited responsibility in making decisions about youngsters.* Paraprofessionals may often be

Figure III. A MAN-MACHINE MODEL OF INSTRUCTIONAL BEHAVIOR



highly skilled and degreed but are not considered to be working in the decision-making capacities of preactive or retroactive teaching.

a. *Teaching aides* carry out learning prescriptions drawn by a professional specialist or specialists of the team. They interact responsively in the teaching-learning situation and collect evidence of the student's performance, but do not plan instruction, evaluate or interpret findings.

b. *Technicians* are highly specialized manipulators of the mechanical environment. These are materials, media, computer, plant maintenance, food, transportation, (etc.) technicians, whose facility supports the instructional staff and helps it capitalize upon the potential of modern technology.

c. *Clericals* are a form of technician presently employed to manage cumbersome information flow of schools. As computer equipment assumes more and more of a place in information management, many clerical tasks will be eliminated.

d. *Volunteers* are a form of aide—in many capacities—whose services are contingent upon goodwill. They can be vital adjuncts to the team.

VIII. THE ONGOING SEARCH FOR STYLE

The end of individualized instruction is the self actualization of the individual. Both teacher and learner share in this search for self. The teacher's progress toward actualization may be called his search for style in that style is the self dramatization of the individual personality in terms of the audience and occasion it encounters. Teaching is behavior which exists only if there is a learner and a learning situation to create it. What the teacher makes of himself, his learner, and his learning occasion becomes the dramatic actualization of his style. (15) When a teacher selects a teaching style, he consciously or unconsciously, makes choices. The choices he makes are significant in dramatizing the personality he is electing to be in relation to the individual he believes he is addressing amid circumstances he chooses to define. In the final analysis the teacher is judged by this actualized self which comes through to the learner to engender a product in performance or growth.

We have traced the evolution of factors which affect the nature of teaching style in the coming school scene. We have shown the shift of emphasis from the teacher as presenter of information to the teacher as facilitator of conditions for learning. We have seen a greater emphasis upon the preactive style of teaching where the teacher must work with superiors, with peers and with myriad sources of data to skillfully diagnose the child and expertly prescribe for his progress. We have seen the phase of interactive teaching take on the challenge of matching teaching-style factors of influence, management, relatedness, tone and operational level to the learning style of the pupil and learning activity at hand. We have seen the teacher's growing role in the evaluative phase of teaching, where the teacher's style must induce objective interpetation of the system as a whole and of his own part in it. We have traced some implications of these conditions upon the continuing education of teachers and the organizational staffing of schools. All of these elements have implications for the continued tasks of staff development as they relate to the individualization of instruction.

If style is the teacher, then teaching is the dramatic recreation of the person who *is* into the person who *does*. The unique combination of human characteristics which each individual brings to the act of teaching are day by day, moment by moment transformed into the creative behavior of teaching where style brings the teacher ever more congruent to himself, to his learner, and to the goals of learning.

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15. The definition of style employed is adapted from its use in ancient and modern rhetoric. I am indebted to the phrasing of Walker Gibson in his preface to *Tough, Sweet and Stuffy: An Essay on Modern American Prose Style.* Bloomington: Indiana University Press, 1966: "...When a writer selects a style, however unconsciously, and so presents himself to a reader, he chooses certain words and not others, and he prefers certain organizations of words to other organizations. I take it that every choice he makes is significant in dramatizing a personality or voice, with a particular center of concern and a particular relation to the person he is addressing. Self dramatizations in language are what I mean by style."